STATEMENT OF WORK FORMAT

Low Level Alpha/Beta Counting System
May 15, 2009

PR: 4200292771

Note: Only use the sections that are applicable to your procurement.

Background

- The GSFC Radiation Protection Program which is regulated by the Nuclear Regulatory Commission (NRC) and GSFC NRC license #19-05748-02 and #19-05748-03 are required to perform radiological sampling wherever radioactive material is be utilized. A system that can count low level swipe samples taken from radiation use and storage areas and in emergency situations the affect area to clear the area is required. This system will support all GSFC projects that will utilize radioactive material as part of their mission system.

Objectives

- The requested counting system will be used by the GSFC Radiation Protection Office (RPO) to conduct radiological surveys of use and storage area were radioactive material is being used by researchers on both the Greenbelt and Wallops campuses to verify that these areas met the Federal Regulations contamination limits. This system is also used to perform leak test of specific radioactive sources as required by our NRC licenses.

Scope

- The contractor shall delivery a system that has the following specifications: automatic sample counting for ultra-low background counting of alpha and beta particles; utilizes a windowless gas flow proportional detector, which shall also be capable of operating with a Mylar window in place; accommodate 2 in diameter planchets with depth options to include 5/16", 1/4", and 1/8" and the planchets will be loaded in a removable holder magazine; incorporate a low background 4Pi lead shield and the shield should be fashioned in a spherical shape and be comprised of two primary sections in clamshell configuration with a shield thickness of approximately four inches; incorporate a guard detector for cosmic background rejection which also utilizes a gas flow proportional detector; offer control via an include computer running an appropriate Radiochemistry Applications Software Packages such as Vista 2000 and the software shall offer the ability to store and utilize Mass Correction data/curves, control charts, routine definitions, and other such capabilities as found in Vista 2000; provide the following warranted efficiency capabilities (4Pi): 3H (Tritium) >15%, Sr90/Y90 >45% and Am241 >45% and background performance of approximately: 0.20 cpm or better for Alpha and 1.5 cpm of better for Beta.

Tasks or Requirements

- The contractor needs to have the system (counter, computer, software, and printer) delivered to the Health Physics Lab in Building 22, room 070K, install the system on-site, perform testing of the system to ensure that it is in working condition and provide hands-on training of the system to the RPO staff.

Deliverables or Delivery Schedule

- Within 60 calendar days from the award of this contractor the contractor shall delivery one low level alpha/beta counting system with operating PC computer, printer and system computer software to the RPO staff in the Health Physics lab in Building 22, room 070K. The contractor shall conduct a full system check of the system after set-up in room 070K to certify the system. The contractor shall provide a hard copy manual for the counting system that covers all of the systems functions. The contractor shall provide an electronic copy of any computer software that is specific to running the counting system as backup for any computer system failure. The contractor shall provide the RPO staff hands-on training on all the functions of the counting system.

Government-Furnished Equipment and Government-Furnished Information

- N/A

Security

- Contractors coming on-site to set-up the system are required to be United States citizens and be able to provide proof of such so that they can be granted "unescorted" access.

Place of Performance

- Goddard Space Flight Center's Health Physics Lab in Building 22, room 070K located on the Greenbelt, Maryland campus

Period of Performance

- Two to Three days on-site to install the system, verify system is functioning as required and to conduct hands-on training for all RPO staff.